



THE FAT SUMMIT

Separating Fat From Fiction

Transcript:

Interview with JJ Virgin
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Interview by Mark Hyman, MD
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Dr. Hyman: Hi, this is Dr. Mark Hyman. Welcome to the Fat Summit and I'm here with my good friend, JJ Virgin that I've known for over, I don't even want to say like 20 years maybe.

JJ: Wow! And we keep getting younger!

Dr. Hyman: We do and it's amazing! Look at us, right? And we were both really in the beginning of the Functional Medicine movement, learning about how food is medicine, learning about how to use therapeutic nutrition, and you are one of the leading nutritionists in this space and I remember, I was just really impressed with your thinking and your approach and I got to know you over the years and we both said we've evolved out thinking from what we used to think was healthy to now what we actually know is better for us and we're our own experiments, right? We're. . .

JJ: Yes.

Dr. Hyman: I didn't want to say how old you are because that's not kosher but I'm 55 and. . . .

JJ: 52.

Dr. Hyman: Right, go JJ! See? So you can get younger as you get older as you can see and if you understand how to put the right fuel in, take out the bad stuff, your body's quite extraordinary. So, you know JJ, you've done some amazing work over the last few years. I've followed you very closely and we're good friends but you've written four New York Times bestsellers. The latest one is the "Sugar Impact Diet," "The Virgin Diet Cookbook" and you're really digging into this issue of sugar, which is also been a passion of mine and you really talk about is this whole world. And I think most of us in the nutrition world, we're taught that we should be eating a low fat diet and that bright white rice, bread, and cereal and pasta were health foods. Bagel was a health food in the morning and these big muffins were like these giant muffins were breakfast and everything was like kosher with that. And suddenly, it's changed. And so I'd love you to share your own experience of a nutritionist going to study nutrition and then counseling patients. How did that all shift for you? What happened?

JJ: Well, I saw that it wasn't working and I'm not insane so I actually started in the exercise science field and I was in graduate school for Exercise Science and I was paying my way through graduate school as a personal trainer and my clients were in that peri-menopausal age. The worst possible age to start doing a

low fat, high carb diet, right? And we were taught, okay, you have to do lots of long, slow distance aerobics so here we are, let's crash your adrenals. Then you eat a low fat as close to vegetarian vegan as you can, diet, which if you're going to go low fat vegan, what's left? Just all carbs and I was 25 at the time and it was interesting, in my 20s, there I was. I was 25% body fat and I was working out a couple of hours a day and I was following this diet and I looked okay. I didn't look like I looked now, working out a quarter of the time, right, and eating.

Dr. Hyman: I'm into not the eat less, exercise more. I'm into the exercise less, eat more. That's what I like. I'm on that plan.

JJ: Yeah. But you know, I utilized pretty quickly that if I made people worse, they probably weren't going to continue to hire me, right? And I looked around and went what if everything you're being taught in school is wrong and it was interesting because I went into the stacks in the bio medical library at UCLA and I started digging through because you know when you're doing your thesis, you have to get the new research. But our bodies have not changed so I started digging back and what I found was what we used to use, which was burst training - all this intense exercise and these high fat, low carb diets had crazy results, right?

Dr. Hyman: There was research on this that you saw?

JJ: Yes, there's research on it. But more importantly than that, there's as you know, you can make a study and show anything. It's first you start with the pilot test, right? So you start with the pilot test to make sure that what you're doing or tweak things so that it will be true.

Dr. Hyman: Right, right.

JJ: Like we must call it what it is. So I started at looking at all this but then we also go through, you go what's the biochemistry because the truth is always in the biochemistry. And then you look at the biochemistry and you go, but eating a low fat, high carb diet makes no sense. Doing tons of cardio makes no sense. I remember looking back going, "Wow! There was a study that showed that women who did more running actually had a tougher time controlling their weight because if they missed a day of exercise they started gaining weight."

Dr. Hyman: Yeah.

JJ: Who knew why but back then I was like, "Huh, what could be happening?" And it became very clear to me that you add muscle.

Dr. Hyman: What was the reason?

JJ: Huh?

Dr. Hyman: What's the reason?

JJ: Well, so there were a couple of reasons. Number one, they've shown that the muscle mass of a marathon runner is similar to the muscle mass of a couch potato.

Dr. Hyman: Really?

JJ: As we know, muscle mass is what's going to control your metabolism two ways. Number one, because it requires more energy to remain on your body, the turnover. And number two, because it's where you first start to become more insulin sensitive so that you can control your blood sugar better and burn more fat. So when you looked at all this cardio, not only are you burning out your muscle, your also burning out your adrenals and you're teaching your body to be better at storing fat, not burning it, so, yikes.

Dr. Hyman: That's the opposite of what you want, right?

JJ: Yeah, yeah, yeah. But remember back then it was loads of carbs and loads of cardio.

Dr. Hyman: But low fat yogurt and running 10 miles and you're screwed.

JJ: I absolutely used to - and you're going to love this, I used to run because I was running through my divorce so I ran like Forrest Gump and I remember. . .

Dr. Hyman: Run JJ, run.

JJ: Run! So I was going to find - if I'm aggravated, I'll run so every night I'd go and run for two hours. I was living in Santa Monica and halfway through the run, I'd go to the frozen yogurt store for some fat free frozen yogurt.

Dr. Hyman: Yeah, of course. Get some low fat yogurt, it's like. . .

JJ: Yeah, its fat free!

Dr. Hyman: I thought the same thing. I thought sugar was fine and the thing is when you eat a low fat diet, what happens? You crave sugar. Like when I was a vegan and a vegetarian, I just was going after the cookies and the ice cream and the . . .

JJ: Every two hours. I used to, when I was a trainer, I used to drive around with a cooler in my car with stuff and I used to pop into the frozen yogurt store and I used to pop into Il Fornaio to get fat free bread. I'd get the sourdough bread, no fat in the bread - you're fine.

Dr. Hyman: Coca Cola is fat free, right?

JJ: Oh God! I worked at Pritikin too. I was training people at Pritikin so I would get a bag of those muffins.

Dr. Hyman: Right? Amazing!

JJ: Or those cupcakes. Let's call them what they are, they're cupcakes.

Dr. Hyman: So then you started working with people and you started shifting and getting people to eat more fat, less carbs? What happened?

JJ: Yes, so I made two major shifts. I made, of course, a shift in the exercise, which I hope we'll get to at some point. And then I made a shift in the diet and the diet shifted - I started just bringing down the carbs. Moving to carbs that were Whole Foods carbs like trade the pasta for the spaghetti squash and then adding in the fat because you can't have a low fat, low carb, low protein diet. You can't have a 20%/20%/20%. Something's got. . .

Dr. Hyman: If you're a breatharian.

JJ: Yeah, exactly! So, as I pulled the carbs out, we've got a ceiling for protein. Obviously, the only thing you can bring up is fat and I know this as I started to bring fat up is that people look a lot better. Their hair, skin, and nails looked a lot better. Yeah! They were a lot nicer, happy people, right? And they weren't hungry all the time. So all of a sudden, you could go four to six hours and that's my litmus test now is, are you a sugar burner or fat burner? If you can only go one or two hours or three hours in between meals, there's something wrong there, right?

Dr. Hyman: I'm going to stop you for a minute. You just said three things that are bombshells, right?

JJ: Okay.

Dr. Hyman: One, you're hair, skin and nails get better. Two, your brain and your mood get better and you're happier. And three, that you're not hungry all the time, like if I could like promise that to people. . . So how does fat play a role with all that? Like can you break that down for us, each of those areas? What is biology about? What's going on and what fats do that?

JJ: Yeah, let's look at what do we do. I'm always amazed with the amount of money that women, myself included, spend on personal care but what's amazing to me is I'll see some spending all of this money on personal care and then going to the doctor for lasers and fillers and all this and then eating a high sugar, low fat diet. And I'm like, the most aging thing you can do to your skin is eat sugar and remember, all carbs, except fiber, turn into sugar.

Dr. Hyman: It's inflammatory.

JJ: Right! It's inflammatory and it glycate, which means it binds - the sugar binds with the protein and it makes you wrinkle and get brown and old fast. It ages you fast. So when you look at it. . .

Dr. Hyman: Sugar makes you wrinkle, old and brown. I got that. Take home message.

JJ: Look at you, look at you. Honestly, you look the best that - every time I see you, you just keep getting better.

Dr. Hyman: Yeah, it's true.

JJ: Like, and again, we've known each other forever, right? And you do - you just keep getting better and we've both evolved the diet and I know both of us started early on getting heckled because we both were like, it's not about the calories. It's really about the fat. So the fat, first off, think of it as your body's internal awesome moisturizer. You're sitting here trying to put all this moisture on, you need to get it in so first place starts with fat and then fat helps with bone remodeling so you want to have healthy bones and healthy hair, you've got to have the fat. The next thing and this was, I'm the ultimate poster child for this, having a son who was in a coma and having a traumatic brain injury, the reason my son is alive and functioning and just did a cool interview yesterday. He's

been on Sanjay Gupta and he's been on The Doctors is tons of fish oil because he was on it before the accident and it protects your brain. A brain is - we're fat heads and we're three fat heads.

Dr. Hyman: And 60% is omega-3 fats in your brain, right?

JJ: Yeah, so and by the way, if you're eating a lot of damaged fats, you're going to crowd that out so you need to saturate. If you haven't been eating enough omega-3 fats, you need to do saturation so you can get those levels up.

Dr. Hyman: What you said is really important, so if you're eating a lot of omega-6 fats, which are vegetable oils like safflower oils, corn oil, soybean oil, what it does is it blocks your body's ability to convert to omega-3 fats or to use the omega-3 fats so it's really a double whammy. One, we're not eating enough omega-3s and two; the oils that we are eating are actually causing worse of a problem. That's like a big take home.

JJ: Yeah, a huge one so when Grant had the accident, we loaded him, 20 grams a day of omega-3s. And now, he's still on 10 grams to this day so. . .

Dr. Hyman: It's a lot, right? That's a lot. That's like about 20 cans of sardines.

JJ: Yeah.

Dr. Hyman: It's a lot.

JJ: Yeah, thank God you can do it just by taking a little oil because 20 cans of sardines would put me over the edge. But his brain seemed. . .

Dr. Hyman: But your skins going to look great so you might smell bad but. . .

JJ: Exactly, it's like what's that smell?

Dr. Hyman: You can't have everything, right? You want good skin or good breath? I don't know.

JJ: And then what was the third one I said? I said good hair, skin, and nails, happy mood and you know the study they've done on fish oils. I never understand why if someone is walking into the doctor with depression would we not just start looking at their diet and making sure that they've got a good level of omega-3s?

Dr. Hyman: Yeah, JJ, doing Functional Medicine, we do a lot of testing and we actually test people's fatty acid levels. We can see if they're high or low in omega-6s or omega-3s or inflammatory fats or trans fats or the ratio of fats, and it's fascinating what you see. And I've seen so many patients who we've treated their mood disorders and they're ADD even autism and dementia by using high dose of a fish oil to help the brain function better. And it's just extraordinary and there's plenty of research on this. There's a lot of research on how this all works and it's because your brain cells are made up of fat and the cells have to communicate, the need the fat and the skin, the same thing. You've got your hair, your skin, and your nails really thrive off of having the right fats and a lot of that is omega-3 fats and 90 plus percent of us in this country are deficient because we don't eat them. We don't eat algae, we don't eat wild foods anymore, and we don't hunt and gather. We eat fish occasionally and even if we eat fish, it's the not the right type of fish so we're all kind of screwed, and then if we look at that phenomenon, it's pretty interesting. There's a guy named Hedwin, you might have known his work from NIH who's done a lot of work on omega-3 fats and he's like, "A lot of our social problems are related to this deficiency, which causes more violence, more suicide, more homicide in the country's which have low levels of omega-3 fats, it's fascinating!"

JJ: Yeah, well that plus all the additives and sugar, it's like little hits. It was amazing in the hospital when we were able to bring Grant's fish oil up to 20 grams because I had to sneak it.

Dr. Hyman: But by the way, they'll serve him like green jello and macaroni and cheese and like ice cream for dessert and that's okay, right?

JJ: I had to fight them. I actually had a big sign in the hospital that said, "No Ensure, no Crystal Light" with a brain injury. Amazing! But it's from the time that I got him, because I kept sneaking it, and then when I moved to the next hospital, we moved from 5 grams to 20 grams and he went from saying, "Let's go, let's go, let's go" to calling me up in the middle of the night and having an entire conversation.

Dr. Hyman: Unbelievable!

JJ: Yeah, incredible! So there it is, you want a big brain, fish oils are critical and eating fish from the store three times a week, doesn't cut it.

Dr. Hyman: And it does something else to your brain, which is the third thing you mentioned, which is you're not hungry all the time. Like when I ate sugar and carbs, I was hungry all the time.

JJ: Oh I know, it's amazing! Remember cereal and milk for breakfast? Talk about, wait a minute, I need to eat again. If you look at what fat does, fat works at small contexts so treating a release of some chemicals and neuropeptides that tell your brain, you're full so that's what we want to have happen is we want our brain to know we've actually eaten and one of the challenges we have is sugars, especially fructose, is that you don't get that communication, and if you don't get that communication, you're actually making more fat and you're still hungry, which is I can't think of much worse than that.

Dr. Hyman: Yeah, right? So let's just pause there for a minute because you basically connected eating sugar to storing fat so how does this whole idea, if you eat fat, if you eat butter, it's going to turn into butter on your hips, right? Or if you eat something that's fatty like high fat yogurt, it's going to like end up on your body? The fat you eat will be the fat on your body. It seems to make sense, right? It's the same word, it kind of looks the same but eat fat, get fat, but actually that's just not turning out to be true. So tell us about how actually you do create fat in your body and what goes on. That's really all your work around sugar.

JJ: Yeah, and you know what, as you said that, I went, oh my gosh, I actually remember 25 years ago saying, "Eat fat, get fat."

Dr. Hyman: Yeah. Now, my new book is, "Eat Fat, Get Thin."

JJ: Yes! It's, I'm so sorry to anyone who was with me 25 years ago. It is so interesting because it all comes down to the fact that your body is not a bank account. It's a chemistry lab so you can't use the simple equation like eat fat, get fat because you've to look at the hormonal responses of when you eat fat and fat is insulin neutral. It doesn't raise insulin and it all comes down to what's happening with insulin except in the case of fructose so you look at carbohydrates and you eat carbohydrates and your blood sugar goes up, so your insulin has to come up to bring the blood sugar down but the problem is insulin is a slow acting hormone so then it stays there and then you're hungry because your blood sugar came down and then you eat more carbs, your blood sugar bumps up a little bit higher and just starts to go on and on and on and so you think, "Well, then I'll just have fructose, it's from fruit, because it won't raise my insulin," but

then fructose doesn't raise your insulin, which is great except that it goes straight to the liver and it starts making fat and it didn't trigger insulin, which insulin has some good points in that it helps boost in that it triggers leptin and ghrelin and as long as you don't go overboard with it and the worst of all is when you put the glucose and the fructose together because now you're raising insulin and making fat and just got super bad, super bad. But you look at fat and we were both I know traveling in the same place recently, we both ate a lot of fat as one of the mainstays of our diet and I wasn't hungry. I was feeling like I was out six to eight hours and not hungry and. . . .

Dr. Hyman: I actually lost weight. I actually ate too fat and I actually...

It's a really important thing. David Ludwig is a friend of mine and he's going to be on The Fat Summit. He's a Harvard scientist and he's done a lot this work. He said, "Mark, think about it. You have a type one diabetic. They make no insulin and what happens to them? At the beginning of their disease, before they know they're diabetic, they're hungry all the time and they're losing weight. They're actually eating 10,000 calories a day and they'll lose weight." So how does that match up with the calories in, calories out theory because they have no insulin so they can't store fat so when you eat sugar, you're basically producing tons of insulin and you're storing the fat instead of burning it so how do you switch from being a fat storer to a fat burner?

JJ: Yeah, and the sugar and fat diet, I call it being a sugar burner or a fat burner and when you look at a sugar burner, they're that person who's been following the popular recommendations that you should eat a low fat, high carb diet - start the day with that juice, the cereal, the banana, the skim milk and. . .

Dr. Hyman: Oatmeal. Oatmeal, right?

JJ: Oatmeal, it's great. It lowers cholesterol, right?

Dr. Hyman: That's one of the biggest scams in the world that oatmeal is a health food.

JJ: Or wait, don't have brown sugar. Have the honey because it's natural like ugh, gosh! So when you're eating that way, again, you're raising insulin. You're raising blood sugar, you're raising insulin and you're going to be hungry in two to three hours and I think what the real trick is, you don't want to go from fat to dropping your carbs over night because you'll feel rotten unless you do the important trifecta, which is make sure you're getting an adequate, optimal amount

of protein, massively increase your fat, remove the carbs you put the fats in and the carbs you are eating are super high fiber so you've got fat, protein, and fiber trifecta, you won't have any cravings. Like you have no cravings. Your blood sugar is stable. I know this is a big part of your program is this trifecta because we always look at each other and go, "Wow!" I remember when you did the Virgin Diet and you go, "Wow! That's the Ultra Simple Diet." Like you've always been on page with of all this.

Dr. Hyman: It is because it's so - when you look at the science, it's where it is.

JJ: Right.

Dr. Hyman: You and I, we're not researchers. We actually treat real humans, right? We practice.

JJ: But you see if it works or not so and that's where all it comes from.

Dr. Hyman: And you're paying attention to what your patients are telling you and you're paying attention to their blood work and you're paying attention to the results, you see this transformation and it's like, holy crap! I got the story wrong, right? And both of us, I think, have that experience. I had that experience. I was a vegetarian. I ran like five to seven miles a day and I wasn't really overweight but I was kind of soft.

JJ: Soft, it was soft. You were TOFI. You were TOFI.

Dr. Hyman: Yeah and I was like flabby and . . .

JJ: You don't look like that now, man. You grabbed a hold of - you're ripped. You look like a 20 year old would kill to have your body. It is ridiculous. What are you, like 6% body fat?

Dr. Hyman: I think so and I don't even exercise that much because I'm busy. I run around and I do certain types of exercise but it's really amazing! As of now like I'd say kind of 15 years ago, my body is just so much leaner, so much fitter and it's so easy and I'm never hungry and I feel good and I can eat mostly what I want. And you know what's interesting? I've had patients going. . . and they start negotiating like well, how do I? Can I have stevia? Can I have this? Can I have that? Can I have this? And you go, when you start negotiating, they're like an addict. They're like a sugar addict and then they think they're not going to be able to survive because the power of that urge is so strong and they don't think they'll stop but you're right. Within two or three days of changing with your tri-

fecta of high fat, fiber and protein, all of a sudden, your brain chemistry changes almost overnight and you don't want that stuff. I go by the Starbucks case with all the pastries and the muffins and I'm like, that doesn't even look like food to me, even if I was starving.

JJ: Doesn't call to you anymore. I still remember fighting those cravings even 10 years ago walking by going, oh boy! Wow! Playing the game of this wasn't going to hurt me, what would I have? And to be free of that, to me I look at it like you're in food prison where everyday you're like, is it a good day or bad day? When you eat protein, fat and fiber and especially focus on the fat, it's a non-issue. And I know that the number one question I get asked is, what do you do to cheat and it's like, I actually don't cheat because I just don't need to.

Dr. Hyman: I cheat. I like chocolate covered almonds.

JJ: But that's not a cheat! A grass fed rib-eye with butter or a little tequila with lime. I know someone else might like that a little bit.

Dr. Hyman: Tequila is good. I think you have more metabolic degrees of freedom. I think that's the trick.

JJ: Oh, that's a good one. I'm going to quote you.

Dr. Hyman: Okay, I think the key is how you get more resilient? How do you have what I call, metabolic degrees of freedom, where you can actually have more wiggle room to live without being in a box. Nobody wants to be in a box or be confined.

JJ: Or you have to worry about your calories. I never count calories and you and I have been - you and I were renegades with that calorie thing and we both got bashed about it and now people are saying it. Remember we were like, "It's not the calories."

Dr. Hyman: There's still so much out there. Coca Cola came out with the global energy balanced network hiring scientists to promote this concept of just eating less and exercising more and all calories are the same.

JJ: Hired scientists. Hired is the opportune. . .

Dr. Hyman: Hired scientists. The only thing was that it was this guy who helped me do the research for my book. His name Anahad O'Connor from the New York Times and he wrote this expose about it and he's like, "The scientists

were have found to actually have had Coca Cola register the website for this independent non-profit educational group, right? And the scientists wrote, 'Well, why did Coca Cola register the website?' They're like, 'Oh, we didn't really know how to register a website.'" I mean really, this is 2015. They work at a university. They could ask their secretary. They could ask their secretary. They probably have an IT team. It's like what? Really? And it's pretty funny and I think we're still though in that space. I don't think this is a concept that's still mainstream. Everybody still believes eat less, exercise more. I mean there was a whole HBO series on calories and weight loss and the weight of the national and it was the NIH and internal medicine and Weight Watchers and everybody came up with this whole great series and at the end of the day, it was all about calories. It was all about energy balance. It was all just about, we've got to eat less and exercise more. It doesn't work. If it worked, great but if you focus on that instead of food quality, you can't control how much you eat. If you're, like Gary Taubes says, if you're the Olympic calorie counter in the world, you still couldn't get it right. You're a nutrition expert and you studied nutrition like if I say how many calories did you have yesterday, JJ? Like I don't know. Maybe if I weighed and measured everything all day long and used my computer, I could figure it out. I have no clue and I don't want to walk around thinking about that because I want to feel good and I don't want to manage my food in a way that feels like I'm suffering because I love food. I don't want to restrict what I eat. I want to eat as much as I want. I want to feel good and when you eat the right foods and when you pick the what, you don't really have to worry about the how much because it takes care of itself.

JJ: Yeah, you actually feel full and satiated and that's it. You're done. It's so simple.

Dr. Hyman: It's so simple. So I want to sort of talk about a couple of other things. I think there are some important pieces that are critical to helping to reset your system also. And you talk about this. It's not just the sugar but there's like seven foods in your Virgin Diet that really you say are really holding your health hostage and how do you explain that and what do you mean by that and it's this whole idea of inflammation in food. It's not just about the calories or the carbs or the fat. There's something else going on. Can you kind of just touch on that?

JJ: And it all goes back and I still remember hearing Jeff Bland say "Food Is Information," and I said, "Ooh that changes everything for me." And I was do-

ing early on; I saw that there were all these things that were getting in the way of people losing weight. It wasn't calories in, calories out. It was like what is it? And I started digging through and I identified all these factors and one of them was this food intolerance or food sensitivity and I was doing a test, an IGG test, which looks at your immune response to certain foods and what happened was, I kept doing this test and I did it with all these different doctors' offices so I got to see hundreds of tests. Actually, I think now probably thousands of tests and I'm sure you're going to agree with this one, it was always the same foods.

Dr. Hyman: Yeah.

JJ: I was like, look at it and going, the top ones and it's different for how you look at gluten so I was looking at gluten differently but gluten is at the heart of creating food intolerance so you have to pull with it, right?

Dr. Hyman: It's a gatekeeper, right?

JJ: It is the gatekeeper. It's going to make your gut leaky and sugar is going to contribute so you look at it and you go, you have to deal with sugar and gluten because they're bad in creating the gut problems in the first place and then it was always dairy and eggs. It was 70% of the people had dairy and egg intolerances and then it was corn, soy and peanuts. So I thought, well, what if we just pull these foods out because I believe that we are smart. People are smart and that when they can create their own experience, be their own detective, pull these foods out and become aware because we walk around kind of in a food coma with no idea that food actually can determine our mood, our energy level - gosh, joint pain, as you know. Joint pain goes away like that.

Dr. Hyman: Migraines, skin issues, digestive problems, fatigue, insomnia, everything.

JJ: Exactly, first out should be change your diet because so many things that we're taught is just normal signs of aging that's just normal for you go away in a week or less by making these shifts. So what I did was, I created a program where you pull these even foods out and trap all those most common - that we just started listing. Again, things that people are like, "Oh, that's just normal" or "I just went into the drugstore for that." Why are we selling so many things for gut problems at the drug store, right? They don't fix it, so. . .

Dr. Hyman: It's actually the number one reason people go to the doctor is digestive symptoms.

JJ: And I would imagine pain is probably a number two. It's like digestion, pain and energy - food, food and food so. . .

Dr. Hyman: And that's such a key point, JJ, most people don't connect the dots to what they're eating and how they feel. They go, if I eat the wrong foods, I'll gain weight but can it be causing my migraines or my arthritis or my brain fog or my just feeling like. . . I call it. . .

JJ: Secondary symptom and all of these things and they become low level and we just adapt to them and that's the biggest challenge is we just think they are normal. This is not our normal. You need to go through this period where you're doing elimination so you create a new normal so the first trick is you're going to look at all these issues and rate yourself and then you go through pulling these foods out. And again, what people have always done is swapped them so if you're doing cow's milk, you do coconut milk - simple swaps so you don't even miss the foods and then you come back and this is the critical thing. You take that test again and you go, "Wow! I don't have migraines anymore. My joint pains disappeared." All of those things, again, that you figured were just normal, you can link now to food and then you one by one. You go back and say, how do I feel when I have dairy? Because you know what?

Dr. Hyman: You add it back.

JJ: I don't believe that we are where we need to be in terms of food intolerance testing because there's so many ways that we can become intolerant to a food, so you can't just look at say a IGG immune response. Got to look at hormones, got to look at IgE so there's other things going on. There's genetics. There are hormones. There's your immune system. There's no one test. The best test is you and does it really matter if the test says you don't have a gluten issue when you eat gluten and your fingers swell?

Dr. Hyman: Not really, no.

JJ: If you eat gluten and your finger swell, you've got inflammation.

Dr. Hyman: There's a whole concept of this cell mediated gluten sensitivity, which is not through antibodies, which is typically what we think of but it's this innate or ancient immune system that just gives this general or pissed off response. It's not like a specific response to gluten but it does react to gluten so that's well described and most doctors won't even pay attention to that because it's not something you can measure. It's real. People feel better.

JJ: It's all hype. Haven't you heard about that?

Dr. Hyman: Yeah.

JJ: It's all hype.

Dr. Hyman: I think some people can kind of think of the extreme and I think the fact is, people go to gluten free food but gluten free food is worse. It's higher in sugar, higher glycemic.

JJ: All corn.

Dr. Hyman: Yeah, I did a whole thing on the Dr. Oz show about it and there are all these gums and craps in it that make you feel bad. It's like just an avocado is gluten free. An egg is gluten free. Almonds are gluten free.

JJ: It doesn't have to say gluten free on the label. Do you remember when everything went low cholesterol and they had to say, they had the muffin with the low cholesterol. I'm like; just buy the foods that don't have to say that on the label.

Dr. Hyman: Right.

JJ: You're much better off. . .

Dr. Hyman: My line is, I never buy any food with a health claim on the label because it's probably bad for you.

JJ: That's a good one.

Dr. Hyman: So talking about this whole elimination diet, and it's not just sugar and fat, it's actually inflammatory foods that we become allergic to or sensitive to that are driving weight. And I think that's really important - I wrote, "The UltraSimple Diet" which is about the same thing and actually, as part of all my programs, I had people eliminate the most common allergies. I just touch on it but it's really critical because so many people walk around with what I call FLC syndrome. That's when you feel like crap. That's like what I call the quiz - the FLC quiz - the Feel Like Crap quiz. You take it before and after and you go like, "wow!" And the program I did for the beta, my new book, "Eat Fat, Get Thin," we had 68% reduction in the score they got on their quiz in just a few weeks.

JJ: Yeah so who cares about a medical test? You had a 60% reduction like I take people off these things and you see it all the time and their joints don't hurt anymore and then they eat something and they go, "Oh my gosh! My fingers or my skin broke out or I have a headache." That's the important criteria. There's another piece that's important and one you really nailed is can you do this? There's no point in giving someone a program that they can't do, right?

Dr. Hyman: Right. And it's different. I mean it's challenging for people because one, we don't know how to cook. Two, we never learned how to shop. Three, we don't know much about food and four, it's a food desert out there. It's like a toxic nutritional wasteland where it's hard to find foods and you have to be like hunter/gatherer. So like, I encourage people to learn how to be hunter/gatherers so they can actually manage their food. It's not like a drive by eating where you're in a food emergency and you have to go like to the vending machine or you have to just go get a pizza or like. . . I literally have a week's worth of - maybe not a week but I buy them a day or two worth of food in my bag with my at all times and when I'm on the road, if I'm in Cleveland Clinic or if I'm on an airplane, I want to find something where I have to eat and I - like this morning, I got up a little later and I had to get to the office to do these interviews. I was like, "Oh, I know I didn't have time to make breakfast and I've been gone for two weeks. There's no food in the house. I didn't have any eggs." So I knew that in my bag, in my drawer at work, I have macadamia nuts. I have sardines. I have stuff so I don't have to be starving and I can eat good food and it's just there so I don't think about it. And I think that's really the challenge for people and that's what's so great about your work, JJ, you really make it doable, practical, simple. You get people the tools they need and you break it down and you don't make it all complicated and I think that's just awesome.

JJ: Yeah, it's got to be simple and it's got to be - I looked at this and I've gone to the grocery store and it's actually less expensive to eat healthy. That's one of those crazy myths. Yes, you might spend some more on the salmon, but you're going to spend less on the lentils and the vegetables so it all evens out in the end. It's actually easy and once you get used to making the swaps because it's just habits. You're used to say buying canola oil because you heard it was healthier and you get the extra virgin olive oil or coconut oil.

Dr. Hyman: Is that named after you, the extra virgin olive oil?

JJ: Extra extra virgin. Super extra.

Dr. Hyman: So I want to touch on one more topic here before we close because this is something I know you know a lot about because you're just not a nutritionist, but you were a physical trainer. You know about sports nutrition. You know about fitness and I've been in the gym with you. You kicked my butt. I couldn't move my arms for a week. It was so painful.

JJ: It was so fun! I want to do an exercise video with you.

Dr. Hyman: Okay, let's do it. Let's do it.

JJ: It would be so awesome!

Dr. Hyman: Let's do it. I would love it. Okay, so you are such a - look at your triceps. Look at your arms - look at that. I can't even believe that. I'm intimidated by that so I think how does she know how to do this and what does she learn? And one of the biggest myths when I talk to athletes is "Oh, I need to carb load because I need to have my Gatorade and I need to have my pasta before my race and I need to. . . "And how does that work? Should we be eating carbs before we exercise? How do you fuel yourself for sports? What should you eat after? What should you eat before because I think people are so confused and how do they fuel for sports performance?

JJ: And when you really look at sports, you and I know are both - you look at exercise and we should be moving more, which is just gentle exercise like take the stairs, walk farther in the parking lot. We should be doing that every day. Wear a pedometer, collect 10,000 steps. We should be doing that. That is not exercise. In order for you to do exercise, you should get hot, sweaty and it should hurt a bit. When you look at all sports. . .

Dr. Hyman: Hurt a lot when you exercise when you exercise with JJ.

JJ: Hurt a lot when you workout with me so it's all really burst style training. Look at all the sports: basketball, volleyball - they're all burst training. They're not endurance types of stuff like running.

Dr. Hyman: What do you mean by burst - tell us what you mean by burst?

JJ: So burst is where you go all out for 30 to 60 seconds and then you recover for twice as long so when we were at the gym, I made you do some pull ups where you cried and whined and then I let you recover.

Dr. Hyman: Hey, that's like not public information.

JJ: Like, why didn't we get the video of that part of it? After video? But we did full body types of movements: pull ups, pushups, squats, lunges. You would do something like for 30 to 60 seconds and then you walk it off because you're going to pump your lactic acid and then you're going to buffer it, actually use it as fuel source. When you do that type of exercise, yes you are using carbohydrates and you're burning off your fat storing enzymes but you're not using a ton of them. When you look at what we use for fuel throughout the day or before doing endurance exercise, we're using fat. We really want to teach our body to use fat as our primary fuel source. When you do burst style training, you actually burn off your carbs so you want to do a little bit of a carb - you want to get some carbs in afterwards, which can be a simple protein shake with some healthy fats and some berries in it and you're there. You don't have to go eat tons of carbs.

Dr. Hyman: No Gatorade? No Gatorade?

JJ: No, 25 grams of some lentils or some sweet potato or some squash. It's not a ton of carbs with some protein and some healthy fat. What you really want to do is teach your body how to use fat better. If you are still doing endurance training, which I'm not a big fan of because it creates more oxidative stress. You age yourself faster and it burns up muscle and it raises stress hormones but if you are. . .

Dr. Hyman: I run slowly so I'm good.

JJ: Run slowly, walk but if you are, you want to make sure . . . or go for a nice pedal around, cycle. You want to get your body to use fat for fuel. You can't rely on carbohydrates when you're doing training so you want to teach your body to use fat for fuel and so if you're eating tons of carbs, you're keeping insulin up. Your body cannot access the fat so the idea of doing that for exercise doesn't make a whole lot of sense to me and when you're doing burst style training, the interesting thing that studies show, the fuel you use during exercise is the fuel you store back after exercise. So if you're using more carbs during exercise because of burst training, then you'll refuel your muscle stores of glycogen and carbs after exercise. You get more glucose tolerant. You have better insulin sensitivity so let's say you have that sweet potato after exercise with some avocado and a little chicken, you're going to suck the sugar from the sweet potato into your muscles where it's like putting gas in the gas tank, right? You're charging the battery of your Tesla so that it's sitting there ready for you for the next time.

But you've also burned off your fat storing enzymes so your body now can access stored fat for fuel, which is what you want to do and because you've done the burst. . . .

Dr. Hyman: What are those fat burning enzymes? What are you talking about?

JJ: The fat burning enzymes and when I can't think of the name. I knew you would do this to me.

Dr. Hyman: That's okay because I'm not sure what they are.

JJ: So you've got the fat burning enzymes, you get better at using fat for fuel because you're more insulin sensitive so when you are eating carbs, your body can handle it better, right? So critical thing there and you're also building more muscle, which is critical because remember when you're building muscle and you're becoming more insulin sensitive but you also have that muscle in there that requires more energy to be on your body. And so, it's all about making that metabolic shift and the fuel you're using during exercise along with the right type of exercise helps you make that metabolic shift.

Dr. Hyman: Should people eat before they exercise or do any. . .

JJ: Gosh, this is one of the biggest debates in the exercise world is that if you go into an exercise session and you haven't eaten - let's say you had an overnight fast and you go and workout that you'll use more fat in that workout. Well, if you go back to the science, it doesn't make a lot of sense to me because what you really want to be able to do during that workout is workout as hard as possible. Now, if you eat a big meal, obviously, you have so much blood, it's going to be going into digestion and not actually working muscle so it doesn't make sense to eat a big meal but what really makes sense is for you to walk in with as much energy as possible so if you need to eat a little something before you go into the gym or into your sprints down the street or whatever, it's a little bit, not a lot bit.

Dr. Hyman: So like I read some of the research on MCT oil and coconut oil and actually sports performance and I've been playing with it. Like when I go for a long bike ride, I'll take a table spoon of coconut oil or more before I go and I feel like I'm just the Energizer Bunny, I can just keep going and I feel great and I'm not hungry and I have energy and I don't poop out at the end and can you talk a little bit about that?

JJ: So here's, if you want to look at what would be the best ergogenic aid, the best thing to help you with exercise, it would be to use our buddy Dave's Bulletproof Coffee because you'd have a little caffeine, which we know can actually help release some fat. We have the MCT oils, which your body very easily burns as fuel, it's like a clean burning fuel and of course, a little bit of butter. So that's going to help you stay so you're not hungry but also helps you just use fat and if you're doing endurance exercise, it's so interesting because here we are carb loading, but MCT oils would be the single best thing that you could do.

Dr. Hyman: Right.

JJ: And you can actually put a little bit, Dave just worked on something called fat water. You can put a little bit in your water.

Dr. Hyman: Yeah, I saw that. I tried it. It tastes good. Fat water, who knew? Instead of Sugar water.

JJ: But think about that - you want steady supply of energy so that you can go and get your workout so again, if you're going to work out in the morning, I'd probably say go have a little bulletproof coffee because you're going to hit it, right?

Dr. Hyman: Right, it's fascinating. I went to Cornell and I lived in a house with a bunch of people and one of them was a PhD student at Cornell in nutrition and smart guy. He kind of got me inspired. He got me this book called "Nutrition Against Disease" by Roger Williams. It was just a really eye opening experience for me. And now, he's a professor at the University of Buffalo and he studies sports performance and mitochondria and fat. He said, "Mark, fat is the preferred fuel for your mitochondria which are the actual little factories in your cells that turn food and oxygen into energy that runs your cells and your muscles." And I'm like, "Really?" He's like, "Yeah, most people are thinking carb, carb, carb but actually, it's fat." It's hard for people to get over that and actually practically how to use it so there's some great researchers, Volek and Phinney who have done a lot of work in this area. They've written a book called the "Art of High Carbohydrate," I mean, "Low Carbohydrate Performance" and it's really about how to cut the carbs and eat more fat and they talk about the chemistry of it, it's fascinating. We really got this wrong. We got the low fat thing wrong and I think we got this sports fat, carb thing wrong.

JJ: It was that whole Martina - you know, Martina, the tennis gal. Remember the potato guy who told her to eat - she was eating four potatoes before a match?

Dr. Hyman: Yeah, yeah.

JJ: That's where that all got started and then Loren Cordain came out with The Paleo Diet, did the paleo diet for athletes and tracks, athletes giving a high fat, low carb diet and especially the marathon doing so much better performance but if you just think about it, what do you want your body to run on throughout the day? You want it to run on fats, ideally and you don't want to be having to eat sugar every two or three hours.

Dr. Hyman: Yes, as part of this summit, I'm having my friend David Ludwig on. He's done some amazing research where if you actually eat more fat, it literally speeds up your metabolism and you actually are much more affected at burning calories.

JJ: Yeah, especially MCT oil, my gosh! MCT oil is bomb! I know you just said you were on it for a week and lost weight. That is one that has so many benefits and. . . .

Dr. Hyman: Come back and go to a vegan restaurant and load up on carbs. They'll always be like, "You're too skinny!" I'm like, "Ugh."

JJ: If I go to a vegan restaurant, I always have to bring in a steak.

Dr. Hyman: My favorite thing was like I held up my book when I finished my manuscript that I put a picture on Facebook like, "Finished my manuscript: Eat Fat, Get Thin. I'm so excited!" And all these comments came in like, Dr. Hyman, you look too skinny! I was like, perfect. So yeah, it's okay. So JJ, is there anything else you want to say about fat, sugar, your work, anything else you want to sort of leave us with as a take home message about what should we be doing and practical tips?

JJ: I think that the most important thing is to get this idea of this new diet pyramid like we created this new diet pyramid where fat was on the bottom, right?

Dr. Hyman: Wow! Because it used to be on the tippy top, right?

JJ: I know! Remember it was a little speck.

Dr. Hyman: Nuts and oil sparingly.

JJ: Eat oil sparingly. Fat on the bottom but be really clear. I always like to say you're making an oil change of where that fat is coming from. That is the single easiest way to change your metabolism is to change the fats you're eating and up them and do not be afraid of eating too much fat because when you eat fat, you feel full so your body actually has a barometer for that one. You won't overeat on it like you can with say, cereal.

Dr. Hyman: How many tablespoons of olive oil can you have, right, until you go enough?

JJ: Exactly, you can only do so much. So you eat fat. Fat, protein, fiber and you got this nailed and you'll be free from the food prison and you won't have to think about this stuff anymore and you'll be happier, prettier, and younger.

Dr. Hyman: Love that, love that. So what are the three fats everybody should eat every day?

JJ: Let's see, definitely coconut oil, MCT oils are key and then some kind of fish, so some kind of fish oil, right? I generally, I take fish oil but I try and eat fish five times a week, depends where I'm traveling to. Sometimes they don't have - they have the scary, not real fish fish.

Dr. Hyman: Yeah, you should check your mercury levels.

JJ: Yeah, and yeah and I've got a sunlight and sauna so I'm also in there. And then, hey, I have to do a shout out for my extra virgin olive oil, after all.

Dr. Hyman: That's right! So olive oil and fish. . .

JJ: But I also add avocados in there. Probably MCT oils, fish and avocados are my top three.

Dr. Hyman: Yeah, I think that's great.

JJ: Because I put avocado in my shake every day I have a half of an avocado.

Dr. Hyman: Those are the fats that I eat: avocados, olive oil, MCT oil, coconut oil and fish oil.

JJ: Good stuff.

Dr. Hyman: So all this complicated blah blah blah but at the end of the day, those are the things you want to include in your diet and yeah, so simple. Thank you, JJ and I encourage everybody to get JJ's books and her new book, "The Sugar Impact Diet" and go to her website, which is?

JJ: JJVirgin.com

Dr. Hyman: How complicated!

JJ: I know.

Dr. Hyman: And also to check you out on Facebook and just learn about JJ and her work and her amazing effort to change our thinking about food and get people healthy again. We're on the same team and we're all pulling for each other so thank you, JJ.

JJ: Thank you!

Dr. Hyman: Thank you. All right, take care.

JJ: Bye.